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09/536,366	03/27/2000	Christopher J. Edge	53492USA1A	3630

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EXAMINER

CHUNG, DANIEL J

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/536,366	Applicant(s) EDGE ET AL.	
	Examiner Daniel J Chung	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 25-59 are presented for examination. Claims 47-59 have been added by the amendment filed on 10-8-2004. This office action is in response to the amendment filed on 10-8-2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25-29,31-33 and 35-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swen et al (5,806,081) in view of Higgins et al (5,835,627)

Regarding claim 25, Swen et al discloses that the claimed feature of a system comprising: a source device profile interpreter ["color space conversion"; 52 in "colorsync utilities"; 34] that interprets a source device profile [36] to convert coordinates in a source device color space to a device independent color space (See Fig 2, Fig 3, col 5 line 3-23, col 8 line 3-12); a destination device profile interpreter [52] that interprets a destination device profile [38] to convert coordinates in a destination device color space to the device independent color space (See Fig 2, Fig 3, col 5 line 3-23, col 8 line 3-12); a color transformer ["colorsync utilities"; 34] that generates a color map ["CMM"]

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defining a relationship ["matching"] between the source and destination device color spaces based on the converted coordinates ["various independent and derived color space"; col 8 line 3-12];

Swen et al does not specifically disclose that "user preferences specified by a user independently of the source and destination device profiles ", as recited in claim. However, such limitation is shown in the teaching of Higgins et al. [i.e. generating corresponding image processing parameter data 51 by operating characteristic processing section 21 with inputting input profile data 40, output profile data 42 and user preference independently [i.e. not modifying by device profiles], as shown in Fig 10] (See Abstract line 7-14, Fig 2, Fig 10, col 4 line 6-12, col 7 line 44-67, col 35 line 63-66) It would have been obvious to one skilled in the art to incorporate the teaching of Higgins et al into the teaching of Swen et al, in order to improve operator's satisfaction on final processed image by reflecting user's preferences without complicated hardware structure, as such improvement is also advantageously desirable in the teaching of Swen et al for providing the closest CMMs, which is preferable to a user, with both hardware and software optimized manner.

Regarding claims 26 and 27, refer to the discussion for the claim 25 hereinabove, it would have been obvious to one skilled in the art to incorporate the teaching of Higgins et al [i.e. "other functions", "brightness", "sharpness"...of "image quality

attribute"] (See col 4 line 12-20) into the teaching of Swen et al for including the user preferences with illuminant functions/observer functions, in order to improve operator's satisfaction on final processed image.

Regarding claim 28, refer to the discussion for the claim 25 hereinabove, Swen et al further discloses that the color transformer adjusts the source and destination device profile interpreters based on the user preferences. (See Fig 3, col 11 line 36-42; Also See Abstract line 7-14, Fig 2, Fig 10, col 4 line 6-12, col 7 line 44-67, col 35 line 63-66 in Higgins)

Regarding claim 29, Swen et al fails to teach that the source and destination profile interpreters are configured as removable plug-in modules for use by the color transformer. However, having removable plug-in modules [i.e. external device in computer systems] in similar system is well known in the art at the time of Applicant's invention, in order to reduce physical size of system. Therefore, it would have been obvious to one skilled in the art to include "a removable plug-in modules" into the teaching of Swen et al.

Regarding claim 31, refer to the discussion for the claim 25 hereinabove, it would have been obvious to one skilled in the art to incorporate the teaching of Higgins et al [i.e. "pleasing test image"]. (See Abstract line 18, col 2 line 62-67) into the teaching of

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Swen et al for configuring the source and destination device profile based on pleasing color corrections, in order to improve operator's satisfaction on final processed image.

Regarding claim 32, Swen et al discloses that the color transformer generates the color map ["closest CMM"] in part by reducing color error between the converted coordinates from the source and destination device profile interpreters. [i.e. 34,40] (See 'device profile modification' in Swen et al; Also See 'adjustment process' in Higgins et al)

Regarding claim 33, claim 33 is similar in scope to the claims 25 and 32, and thus the rejections to claims 25 and 32 hereinabove are also applicable to claim 33. In addition, using of forward transformation profiles within the source and destination device profile interpreters is shown in the Applicant's Admitted Prior Art. (See spec. p. 2 line 16-18) Therefore, it would have been obvious to one skilled in the art to include "forward transforms" of AAPA into the teaching of Swen et al in order to achieve accurate color reproduction.

Regarding claim 35, Swen et al discloses that a forward transformation from one of the source and destination color spaces to the device independent color space (See Fig 2, Fig 3, col 5 line 3-23, col 8 line 3-12; Also See spec. p. 2 line 16-18)

Regarding claims 36 and 37, Swen et al discloses that the color map includes a LUT/mathematical expression. (See Fig 2, Fig 3, col 5 line 3-23, col 8 line 3-12; also See spec. p.2 line 18-20 of AAPA)

Regarding claims 38-46, claims 38-46 are similar in scope to the claims 25-27, and thus the rejections to claims 25-27 hereinabove are also applicable to claims 38-46.

Regarding claim 47, claim 47 is similar in scope to the claim 33, and thus the rejection to claim 33 hereinabove is also applicable to claim 47.

Regarding claims 48-50, claims 48-50 are similar in scope to the claims 26-28, and thus the rejections to claims 26-28 hereinabove are also applicable to claims 48-50.

Regarding claims 51-53, claims 51-53 are similar in scope to the claims 48-50, and thus the rejections to claims 48-50 hereinabove are also applicable to claims 51-53.

Regarding claims 54-55, claims 54-55 are similar in scope to the claims 25-27, and thus the rejections to claims 25-27 hereinabove are also applicable to claims 54-55.

Regarding claims 56-59, claims 56-59 are similar in scope to the claims 54-55, and thus the rejections to claims 54-55 hereinabove are also applicable to claims 56-59.

Claims 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swen et al (5,806,081) in view of Higgins et al (5,835,627), and further in view of Ohta (6,108,008)

Regarding claim 30, Swen et al does not explicitly disclose that the source and destination device profile interpreters are configured based on white and black point parameters to account for color variations between media and colorants used by different color display device. However, such processing is shown in the teaching of Ohta (See col 1 line 28-47, col 4 line 9-15, col 4 line 53-64, col 8 line 38-52), in order to perform proper color conversion/mapping, as such improvement is also advantageously desirable in the teaching of Swen et al for matching color information between the various source and destination devices with optimized manner.

Claims 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swen et al (5,806,081) in view of Higgins et al (5,835,627), and further in view of Holm (6,249,315)

Regarding claim 34, Swen et al does not specifically disclose that the source/destination device profile contains raw spectral data that characterizes a source/destination device. However, such limitation (utilizing of spectral data to

construct the characteristic of device profile) is shown in the teaching of Holm. (See col 5 line 15-25) It would have been obvious to one skilled in the art to incorporate the teaching of Holm into the teaching of Swen et al, in order to properly generate device profile with optimized manner, as such improvement is also advantageously desirable in the teaching of Swen et al for matching color information between the various source and destination devices.

Response to Arguments

Applicant's arguments with respect to claims 25-46 have been considered but are moot in view of the new ground(s) of rejection. Specifically, in response to the applicant's argument that the cited references do not disclose that "user preferences specified by a user independently of the source and destination device profiles', the newly submitted reference (Higgins et al) discloses that generating corresponding image processing parameter data 51 by operating characteristic processing section 21 with inputting input profile data 40, output profile data 42 and user preference independently [i.e. not modifying by device profiles], as shown in Fig 10. (See Abstract line 7-14, Fig 2, Fig 10, col 4 line 6-12, col 7 line 44-67, col 35 line 63-66) See the rejection hereinabove.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier

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communications from the examiner should be directed to Daniel J. Chung whose telephone number is (703) 306-3419. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am- 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael, Razavi, can be reached at (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (Central fax)

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

djc
February 5, 2005



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SUPERVISORY PATENT EXAMINER
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